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other sciences have recommended the conservation of the younger men of science by drafting them into scientific service rather than into the army or navy, and have pointed out the importance of abundant provision for the training of additional men of science. Scientific knowledge offers no special resistance to bullets, but when applied to artillery, munitions, transportation, food products or sanitation, it may be the means of saving thousands of lives and millions of dollars.

THE INFANT DEATH RATE AND SOCIAL CONDITIONS

Low wages of fathers and the gainful employment of mothers away from home accompany an excessive death rate among babies in Manchester, N. H., according to the report on infant mortality in that city which has been issued by the Children's Bureau of the U. S. Department of Labor.

The study was based primarily on interviews with the babies' mothers. It was absolutely democratic in scope and included all babies whose births were registered during a single year and whose families could be found. Of all the babies studied, one in six—165 per 1,000—had died during the first year of life. There were wide variations in rate between different groups of the population, according to the fathers' earnings, the employment of the mother, the congestion of the home, and the way in which the baby had been fed.

Nearly half of the 1,643 babies had fathers whose earnings were less than $650 a year, and more than one eighth of the babies had fathers earning less than $450 a year. Only one in sixteen (6.4 per cent.) had fathers earning as much as $1,250. The death rate among the babies in the poorest families was more than four times as high as among those in the highest wage group.

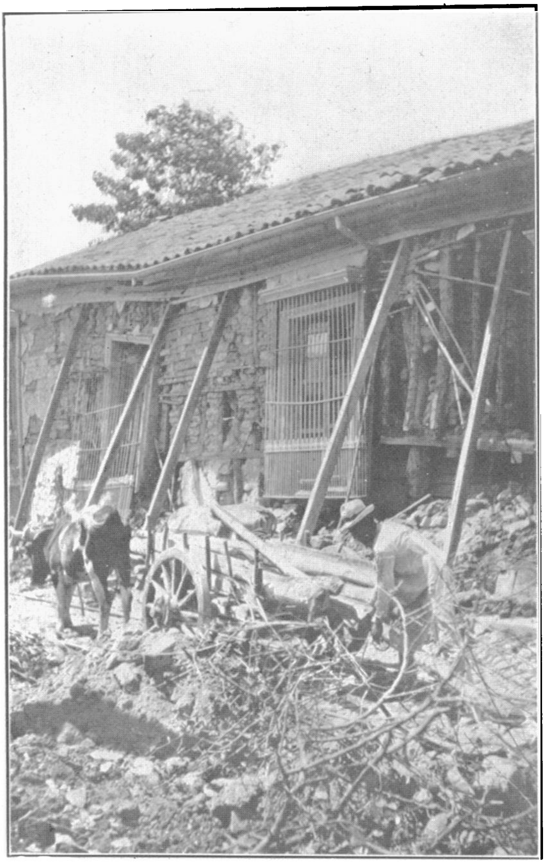
Low earnings on the part of the father appear to be the most potent reason for the mother's going to work. Where the fathers earned less than $450 a year almost three fourths of the mothers were gainfully employed during some part of the year after the baby's birth. As the fathers' earnings rise, the proportion of working mothers falls, until in the group where fathers earned $1,050 or over, less than one tenth of the mothers worked.

Keeping lodgers was the chief occupation of those who worked at home, and working in the textile mills was the chief occupation of those who worked away from home. The mothers of 267 babies went out to work during the first year of the baby's life, and these babies had a death rate considerably higher than those whose mothers worked at home, or were not gainfully employed. The rate is especially high —277.3 per 1,000—among the 119 babies whose mothers went out to work before they were four months old.

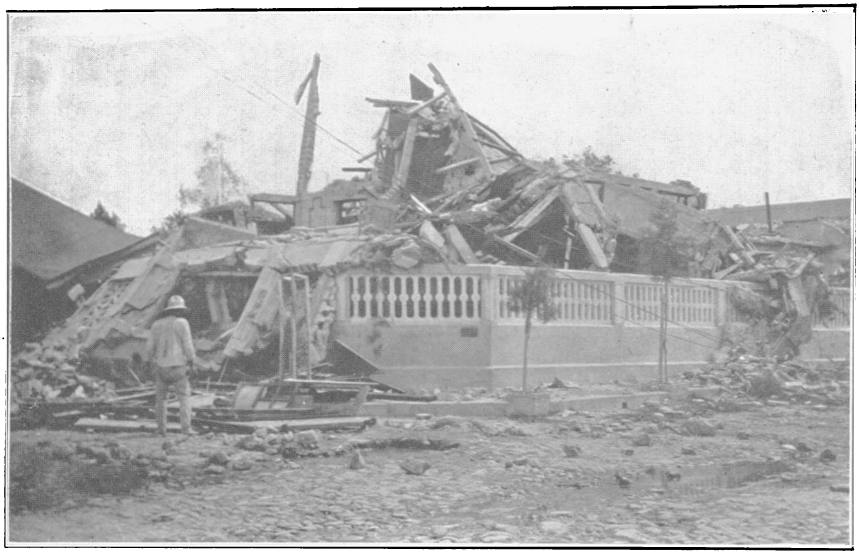
The babies were grouped also according to the kind of house in which the family lived. The death rate for babies whose homes were in one-family houses was 86.1 per 1,000; in houses containing seven or more families 236.6 per 1,000. Similarly the rate showed a steady increase according to the number of persons per room. It was 123.3 per 1,000 where the family had more rooms than persons; and 245.9 where there were two or more persons per room.

THE SAN SALVADOR EARTHQUAKE

DR. HERBERT J. SPINDEN, assistant curator of anthropology of the



A Wrecked House in San Salvador.



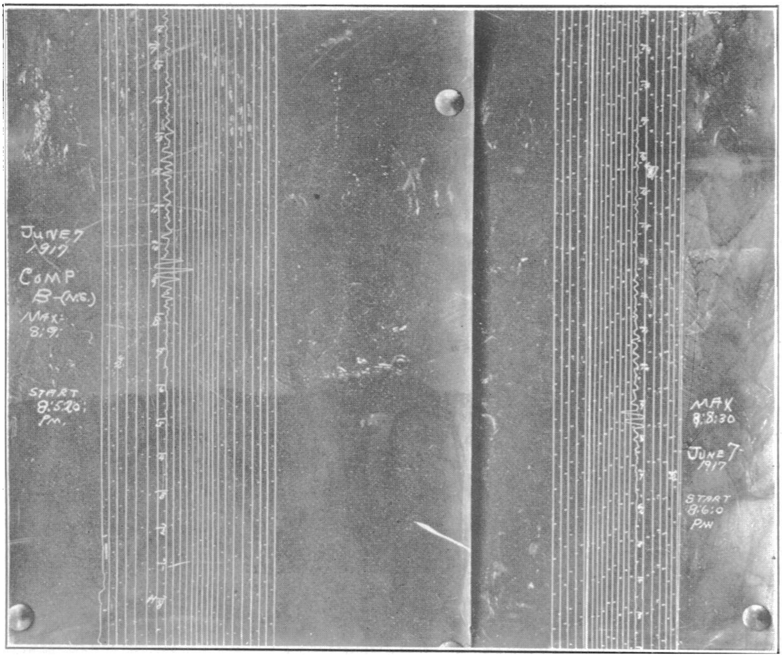
A Ruin of the San Salvador Earthquake.

"THE FALLING ANGEL," Parque de Duevos, San Salvador.

American Museum of Natural History, in a recent letter to Mr. George H. Sherwood, assistant secretary of the museum, gives an account of the earthquake in San Salvador which occurred on June 7. Dr. Spinden was at the time in Central America engaged in studying and collecting patterns and materials for textiles useful to American manufacturers.

The first shock occurred between 6:45 and 7 p. m. on June 7, and was recorded in New York by the seismograph in the American Museum. Dr. Spinden reports that several shocks followed the initial one which, coupled with the outbreak of the Salvador volcano, brought terror among the population who crowded from their crumbling homes into the streets and parks of the darkened city. The shocks were not confined to the first day, but continued at intervals with a gradual, though irregular, decrease in intensity for more than a week. Nearly every hour brought a slight tremor, while more violent shocks occurred on June 8, at 10:22 p. m.; on June 9, at 1:00 a. m., and on June 13, at 10:30 p. m. The usual course of a shock was characterized by a rapid rise to maximum intensity, followed by a gradual decrease or by a series of disconnected tremors, decreasing in violence by slow but frequently irregular degrees. Often, a second shock, called the "echo," followed after a few minutes.

The inhabited regions about the base of the volcano suffered partial destruction, the capital, San Salvador, being particularly unfortunate. Ninety per cent. of the homes were destroyed or rendered unfit for habitation. In many cases the greatest damage was due to the falling of the heavy tile roofs through the inadequate supporting structure. Most of the public edifices, more substantially constructed, suffered but little. Reinforced cement construction stood the test well, while the lighter types of cement crumbled to earth under the strain. The illustrations, sent by Dr. Spinden to the American Museum and here reproduced, show the extent of the damage. The natives, left homeless, have fitted up temporary shelters of mats, burlap and sheets of rusty tin but with the rainy season approaching, a serious situation may result, unless substantial relief from outside sources is received. The food situation has not been critical since the conveyances of some 25,000 people who fled the city were laden with foodstuffs on their return trips. Temporary distress resulting from shortage of water was soon relieved by the collection of seepage from the broken mains



Seismograph Record of the Salvador Earthquake.

This record is from the instrument deposited in the American Museum of Natural History, New York City, by the New York Academy of Sciences. It shows the vibrations of two separate needles—those of the north-south needle being at the left of the photograph and those of the east-west needle at the right. The north-south needle indicated that the shock was felt in New York City on the night of June 7, 1917, at 5 minutes and 20 seconds past 8 o'clock, while the east-west needle began to register at 6 minutes past 8 o'clock. The time of the greatest intensity of the shock as here indicated by wide vibrations was at 8 minutes and 30 seconds past 8 o'clock.

and by the utilization of artesian wells.

The outflow of the volcanic eruption, while abundant, caused comparatively little damage, since it was largely confined to uninhabited regions. Eight vents opened on the west side of the mountain, sweeping the slope with a stream of lava. A number of coffee plantations on the flanks of the stream were destroyed and, for a distance of two kilometers near Acajutla, the railroad was covered with lava to a depth of 30 feet. For the most part, the region affected is identical with that covered by the last great eruption occurring in 1674. It is said that in some places the old flow has been lifted bodily upon the new.

The San Salvador region is perhaps more frequently visited by earthquakes than any other section of America. In 1873, a shock probably equal in severity to the present one occurred, while more moderate tremors are of frequent occurrence. The accompanying record shows the intensity and duration of the shock of June 7 as recorded in New York City by the seismograph in the American Museum of Natural History.

SCIENTIFIC ITEMS

WE record with regret the death of James Mason Crafts, distinguished for his chemical researches and for a time president of the Massachusetts Institute of Technology; of Julius Otto Schlotterbeck, dean of the College of Pharmacy of the University of Michigan, and of T. McKenny Hughes, F.R.S., Woodwardian professor of geology in the University of Cambridge.

A MEMORIAL tablet to the late Dr. S. Weir Mitchell, distinguished as physiologist, physician and man of letters, was unveiled at the recent commencement exercises of the University of Pennsylvania.—A portrait of the late Professor Raphael Meldola is being painted by Mr. Solomon J. Solomon, in order that copies may be presented to the Royal Society and the Institute of Chemistry.—A memorial tablet, including a medallion portrait of the late Sir William Ramsay, is to be erected in the University of Glasgow, of which he was a graduate and teacher.

THE late Mr. W. Hudson Stephens, of Lowville, N. Y., a life member of the American Association for the Advancement of Science since its eighteenth meeting held in Salem in 1869, by the terms of his will has bequeathed the sum of $5,000 to the association.

THE will of the late Colonel Oliver H. Payne provides bequests of more than $7,000,000 to charitable and educational institutions. The largest gifts are to Yale University, Lakeside Hospital, Cleveland, and the New York Public Library, each of which will receive $1,000,000. An endowment of $500,000 is bequeathed to the Cornell University Medical College. Other gifts include: Phillips Academy, Andover, Mass., $500,000; St. Vincent's Charity Hospital, Cleveland, $200,000; Cleveland Jewish Orphans Asylum, $200,000; Hamilton College, Clinton, N. Y., $200,000, and the University of Virginia, $200,000.